

LOUISVILLE MEDICAL NEWS:

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

J. W. HOLLAND, A.M., M.D.,
H. A. COTTELL, M.D., } Editors. JOHN P. MORTON & CO., Publishers.

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"NEC TENUI PENNA."

Vol. XIV.

LOUISVILLE, SEPTEMBER 16, 1882.

No. 12.

J. W. HOLLAND, A. M., M. D., } Editors.
H. A. COTTELL, M. D., }

YELLOW FEVER.

Though at this late date there is probably no danger of a general epidemic, it is evident that yellow fever has gained a firm foothold on our southern coast. Brownsville and Matamoras have suffered notably, and although on August 10th there were but two yellow-fever patients in Pensacola, and these imported cases from Matanzas, the disease spread rapidly, until on September 9th, with a daily increase of from thirteen to sixteen cases, the local board of health declared it epidemic. In Brownsville on the same day there were fifty-one new cases and three deaths. Since that date from fifty to sixty new cases have been reported each day. Among the sick is the faithful Dr. Wolfe, and his condition is such that but little hope of his recovery is entertained. At Matamoras the disease is decreasing, there having been but sixty cases in the town at the date above named. Three deaths from yellow fever, however, had been reported for the twenty-four hours ending with 9 o'clock A.M. on September 9th. Later advices say that the town is now considered free from fever. From Havana ten or twelve deaths per week are reported up to the same date. Among these places Brownsville has suffered most, though the disease here has not been so fatal as in Pensacola. During the week ending September 4th there were five hundred and forty-four cases with twenty-four deaths in Brownsville, the total num-

ber since the epidemic began being twelve hundred and sixty-one cases with seventy-six deaths. Nearly one fourth of the whole population has been attacked by the disease, but the death-rate has been unusually low. This rate, which in some epidemics reaches seventy-five per cent, rarely falling below ten per cent, has been at Brownsville only about six per cent. In Pensacola the death-rate has been fifteen or twenty per cent.

From a study of this, and we may say of all our epidemics of yellow fever, it would seem that the disease is in every instance brought into our southern ports from the tropics, fruit-vessels from the Antilles being perhaps the most common carriers of the infection. The first case in Pensacola was traced to the bark *Saleto*, which arrived July 2d, was quarantined twenty days, and then came up to the railroad wharf, where she was unloaded. On August 10th the captain and two seamen were sick with the fever. On August 25th another case was found on board an Italian bark which had been sixty days in port. Two cases more were discovered on another vessel in the harbor, and on August 28th a case was found in the Marine Hospital, which proved to be a seaman from a New Orleans vessel which had arrived two weeks before. From these centers of infection the disease spread among the inhabitants.

In view of the fact that the inception of the epidemic was among the seamen, and the centers of infection were in each of these cases found among the shipping, the importation theory would seem to be well supported. In fact, this method of origin

is no longer doubted by physicians who practice in our southern seaport towns, and an implicit faith in quarantine is held by one and all of the inhabitants of the yellow-fever zone. That this means is effective to a degree proportionate to the thoroughness with which it is carried out would appear to be shown by a study of the present epidemic. The sanitary cordons established on Arroya, thirty miles from Brownsville, and from Laredo to Corpus Christi, have so far confined the disease to Brownsville and a limited area of country lying to the northward, while the promptness and thoroughness with which all the neighboring places have quarantined against Pensacola have prevented a spread of the affection into the surrounding country.

With every return of yellow fever to our southern coast-line its exotic nature and the value of quarantine as a means of preventing its entrance into our land, are made more apparent; and while we may not expect that for yet many years to come the specific germ of the disease will be found, or a specific treatment devised, we have good reason to believe that when our boards of health—National, State, and local—shall be given the means and the power to do all against this tropical invader that sanitation is capable of doing, yellow fever will be as effectually barred out of our southern States as has been the oriental plague from southwestern Europe since the year 1820.

MICROSCOPIC EXAMINATION OF GUITEAU'S BRAIN.—The Medical News of Sept. 9th gives an account of the microscopic examination of the brain of Guiteau, made by Drs. J. W. S. Arnold, of New York, E. O. Shakespeare, of Philadelphia, and J. W. McConnell, of the Army Medical Museum. From this it would appear that, whatever the expert neurologists may have said relative to Guiteau's mental state, his brain was the seat of extensive lesions. The perivascular lymph spaces of the capillaries of the corpus striatum were filled with granular matter, the

nerve-fibers showed cellular elements identical with those presented by the optic nerve in descending optic neuritis, while in many places in the cortex of the cerebrum a diseased state of the vessels and a proliferation of lymphoid elements in the pericellular spaces, both of the neuroglia cells and of the ganglionic corpuscles, were to be seen. There were also traces of a few recent hemorrhages.

Mens sana in corpore sano! This will doubtless reopen the discussion of Guiteau's mental state, and the medical press will groan under the load of labored arguments, *pro* and *con*, which these learned but verbose specialists will lay upon it. The dictum of *mens sana* may stand approved, but the *corpore sano* doth not appear.

GROSS'S SYSTEM OF SURGERY.—A new edition of this world-renowned work has just been completed and is now going through the press. The author has taken advantage of his retirement from active collegiate duties to revise his Surgery, and with robust health and a vigor of thought not abated with his advancing years, he has brought the work to a satisfactory completion. That the new edition is up to the present high standard of surgery need not be questioned, and its distinguished author may take comfort in the fact that while surgery has made immense progress since the last edition of his work appeared, none have done more than he to further this advancement.

MISCELLANY.

NATIONAL MEDICAL AND SANITARY EXHIBITION.—A convention of commissioners appointed by the National and various State boards of health of the United States, with commissioners appointed by the American Public Health Association, will assemble in Indianapolis, Ind., on Wednesday, October 18, 1882, at 9 o'clock A.M., to take into consideration the question as to the best course to be pursued which may result in holding a national medical and sanitary exhibition in the year 1883.

PEN PICTURE OF PASTEUR—M. Pasteur is described as a man of low stature and powerful frame—spare, angular, and weather-beaten. Of humble origin, the son of hard-working parents, he bears the indications of his race and hereditary bias in every lineament of his countenance and every movement of his well-knit, muscular physique. He is a man of few words, abrupt but clear in his sentences, logical, and to the point. His style of speaking is what would be ordinarily called argumentative; his voice is clear and distinct, but unemotional, and his gestures are quick and impetuous, although wanting in the elegance that arises from early training. It is a very curious fact, but one that finds its correlative in the lives of Wallace, the celebrated British naturalist, and Prof. Crookes, the great master in physics, that, although his fame rests upon minute researches of the most material complexion, M. Pasteur is an ardent and steadfast believer in spiritualism. He takes no interest in the positivist doctrines of Comte or in the evolution theories of Herbert Spencer, who, he thinks, overlook the central fact of the universe, infinity. Like M. Littré, he holds that without a spiritual link the human family would fall to pieces and nations degenerate into barbarian hordes. In his own neighborhood, M. Pasteur is a man of political and social weight, and in his own house he is the soul of genial and pleasant hospitality.—*Med. and Surg. Reporter*.

AN important literary and scientific discovery is announced from Salonica. The works of the celebrated physician Galen, which were supposed to have been lost, have been discovered by M. Papageorges. They are in manuscript, date from the fifteenth century, and seem to have originally formed two hundred and forty-eight sheets. One hundred and forty-four are in good condition, twenty-four are mutilated or worm-eaten, and eighty are missing.—*Medical Record*.

THE latest news in the great field of anti-sepsis may be considered the fact that the sinews of the kangaroo are now employed instead of catgut for ligatures and sutures. They are said to possess none of the disadvantages but all the benefit of all other animal sutures, being especially reliable in the ligature of large vessels and in the suture of wounds.—*Deut. Med. Zeit.; Med. and Surg. Reporter*.

POTASSIUM PERMANGANATE A DANGEROUS INTERNAL REMEDY.—The virtues of permanganate of potash as an antidote to the venom of the Brazilian bothrops have been much discussed of late. M. de Lacerda seems to have obtained satisfactory results in his practice in Brazil. He injected hypodermically an aqueous solution, with the permanganate to a hundredth, and by means of a Pravaz syringe. The experiments of Vulpian and Couty have shown, however, that although the solution may be efficacious when applied at once to the wound, and when the venom has not been absorbed, yet the effect is null at a little distance from the wound, the permanganate being decomposed in the blood. A large dose, on the other hand, would be mortal in its effects. Experiments with animals show that treating zymotic diseases with permanganate of potash should be entirely abandoned.—*Weekly Drug News*.

AMONG the Russian refugees recently arriving in New York were thirty-five medical students, eleven of whom were women. Considering the scarcity of young doctors in this country, and the uncertainty of the coming crop, this gives to the Russian immigration the appearance of supplying a long-felt want.—*Associated Press*.

M. SAINT PAUL has offered the French Academy of Medicine the sum of five thousand dollars to found a prize for the discovery of a cure for diphtheria, the competition to be open to the world and not to be confined to the medical profession.—*Med. Bulletin*.

PROF. LANGENBECK has been made by his government an Active Privy Councillor, with the prefix "Excellency." In this it is understood that Langenbeck steps upon the top-most round of the ladder, so far as worldly honors are concerned.

TWENTY PAPERS, some of them being of high standard, were read at the Canada Medical Association, which met at Montreal last week. A brilliant reception was given the members by the local profession.

HOG-CHOLERA, or the infectious pneumo-enteritis of swine, has appeared in the vicinity of Reading, Pa.

TEXAS CATTLE-FEVER has appeared in Penobscot County, Maine. Up to this time eight animals have died of the disease.

At the bottom of a copper mine at the foot of Kennesaw Mountain, in Cobb County, Georgia, a peculiar liquid of a deep wine color is constantly collecting. The color, odor, and taste of this fluid, though strange enough, are not its most singular characteristics. It has been found that when a few drops of nutgall are added to it the fluid turns jet black, and at once becomes ink of the best quality. Judge Hammett is authority for the statement that the records of the county are kept in this natural ink, which neither freezes, fades, nor corrodes.—*Weekly Drug News*.

"HAVE you any 'Field's Aroma' this morning?" asked a hay-fever sufferer of the druggist. "Never heard of it," promptly replied the pill-worker; "are you sure you have got the correct name?" "I think so; but here's where I saw it," said he, handing a paper to the clerk. The item read, "The aroma of the fields of growing wheat is highly recommended for hay fever." The sneezer was advised to buy a farm.

Dr. RIEMBAULT, in a communication made to the Paris Academy of Medicine, states that he has made a series of researches with reference to "miner's anemia," and he believes that this affection is due to the presence of a worm of the filaria species, and not to that of the *Ankylostomum duodenale*, as asserted by M. Perroncito, of Turin.—*Med. and Surg. Reporter*.

DR. G. G. WOODWARD, U. S. A., who has been in Europe for some months by reason of failing health, has not improved much, according to late accounts from him.

SIR EDWARD BURROWES SINCLAIR, the obstetrician and gynecologist, and well-known writer on subjects connected with his specialty, died recently in Dublin.

DR. FRANCIS ATWOOD, of St. Paul, Minn., died at his home last week of typho-malarial fever. Dr. Atwood was well and favorably known as an ophthalmologist.

THE Philadelphia Presbyterian Hospital has received a bequest of ten thousand dollars by the will of the late George W. Musgrave, D.D.

THE National Board of Health of Germany last year spent nearly four million dollars in the prosecution of its labors.

Correspondence.

NEW YORK LETTER.

Editors Louisville Medical News:

As this will be my last letter pertaining to medical matters, etc., in New York, it will be made up mainly of odds and ends.

Among the last medical gentlemen I became acquainted with while in the city was the eminent dermatologist, L. Duncan Bulkley, of the New York Hospital. He stands at the head of his specialty in this country, and withal is a very clever and sociable gentleman. I attended his clinics, where I saw a great variety of skin-affections, among others syphilis in its various phases. The doctor lectures to a class of twenty or thirty, who are making dermatology a specialty. He illustrates his subject with cases as well as with wax representations and plates. Of the former he has nearly one thousand, and of the latter about two thousand, representing all the varieties of the multiform diseases of the skin. Besides his clinics and lectures at the hospital, the doctor does an extensive private and office practice. He is quite young yet, apparently not over thirty-five years, very energetic and enthusiastic in his profession, and promises to become equal to some of the great lights of Europe in his specialty.

I have noticed heretofore some of the leading men of the profession in New York, among others Profs. Sayre, Hamilton, Flint, Loomis, Thompson, etc., but there are some others about whom I would like to say a few words. There are two young men recently come into Bellevue as professors, who promise to attain in a short time to a very high degree of eminence. I allude to Professors Dennis and Welch. The former is professor of dislocations and fractures, and fills the chair lately occupied by Prof. Hamilton, and the latter is professor of pathology and pathological anatomy. Prof. Dennis was a student of the late Prof. James R. Wood, and practiced with him at the time of his death. He is young in appearance, and probably is twenty-six or twenty-eight years old. He is a graduate of Bellevue, and has spent several years in Europe in pursuit of medical knowledge. While in England he gained the honor of F.B.S., which for a young man is quite a prize. Of course he is well posted in the science of medicine, and is perfectly at home in his department. As a lecturer, he is plain and fluent, with a fine voice.

Every word is enunciated distinctly and sufficiently loud for all to hear. It will not be long till he becomes as popular as a lecturer as his distinguished predecessor, Dr. Hamilton. He was born of wealthy parents, and besides has married a rich wife. In this case it might be said he is an exception to the rule that when a young physician marries wealthy he gives up his profession and takes his ease. Dr. D. is still energetic and enthusiastic. He was greatly beloved by his preceptor, the late Prof. Wood.

Prof. Welch is still a younger looking man than his *confrère*, Prof. Dennis. He may be twenty-five or twenty-six years old, but looks to be hardly more than twenty-two or twenty-three. Pathology to him is like A B C to the most of us. He seems never to be at a loss to explain morbid anatomy and account explicitly for the cause of death. He handles the organs post mortem, and reads off the diseases which caused death as he would a book, without any hesitancy. He is a very fluent and rapid speaker, yet quite distinct in his utterances. He, as well as Prof. Dennis, spent some time in Europe in the prosecution of his studies after graduating in this country. While abroad he devoted a great deal of time to microscopy, and in that particular is quite an expert. All matters of that kind coming up in Bellevue are referred to him. I predict for him and Prof. Dennis the very highest honors and attainments in the profession.

I am sorry that so sociable and pleasant a gentleman as Prof. St. John Roosa, of the University, should bear the odium of having introduced the resolutions into the New York State Society by which the Code of Ethics is changed so as to allow consultations with homeopaths. He is one of the most affable and gentlemanly men with whom I have become acquainted, and I can not believe that he was influenced to act in this matter in the interests of the specialists from motives of pecuniary gain, as charged. But nevertheless, in the estimation of nearly all physicians outside of New York, he made a great mistake in bringing about a change of the code. He holds the position of Professor of Ophthalmology at the University, and also is one of the visiting surgeons at the Manhattan Eye and Ear Hospital. He stands very high as an oculist.

I am sorry the New York Medical Record is so angry at the exclusion of the State Society's delegation at the St. Paul meeting. It uses very big talk when it asserts that there is more medical brains in New York

than is possessed by all outsiders, including the whole American Medical Association. This treads on the dignity of Philadelphia, as she belongs to the outsiders. I think that this little matter will be effectually settled at the next meeting of the New York State Society.

In concluding this letter I will give you a few of what Prof. Smith, of Bellevue, on *Materia Medica*, calls his small doses. He distinctly wishes it understood, however, that he is no homeopathist. I do not recollect to have seen them published elsewhere:

Castor oil, five drops, rubbed up with sugar and given every two hours in intestinal irritation of children.

Tinct. hamamelis, one drop every fifteen minutes as a sedative in children.

Tinct. pulsatilla, one drop in desmenorrhea every fifteen minutes, also in orchitis and epididymitis.

Fowler's solution, one half drop in nausea of pregnancy and after a drunken debauch.

Tartar emetic, one grain in a quart of water. Dose, one teaspoonful every fifteen minutes in the bronchitis of children.

Calomel, one fiftieth of a grain in syphilitic headache, without gummata, every fifteen minutes. Also in children with vomiting, accompanied with mucous discharges, one half grain bichloride of mercury in a pint of water, and administered in teaspoonful doses every fifteen minutes; good for the same affections.

Fl. ext. ergot, one drop every fifteen minutes in menorrhagia.

This is my last letter, as announced at its commencement, respecting my observations, etc., in New York city during the past winter. I used my best efforts to acquire knowledge, and in doing so took in a wide field for observation. I attended some three medical colleges and six hospitals, besides occasionally visiting a medical society. You might say I made my field too broad, seeing and hearing more than I could digest; but, being young and ambitious, I aimed to see a little of every thing and digest what I could.

Although New York offers as fine a field for observation, medically speaking, as perhaps the most of European capitals, still I would not advise western young men, who wish to study medicine, to go there in preference to their home schools. In the first place, it is attended with a great deal more expense, which is a considerable item with many; and secondly, they can always see and hear as much as they can understand

at least for the first two sessions of lectures at home. After they graduate at home then they will be prepared to go to New York and finish up, if they have the means to do so; if not, let them go to work and make the required money, at the same time keeping pace with the advances of their profession by reading, etc.

T. B. GREENLEY, M.D.

ORELL, Ky., June, 1882.

THE CAUSE OF FEVER.*

Editors Louisville Medical News:

During the last meeting of the Mill Creek District Medical Society of Indiana I received the inspiration which resulted in the following able paper. I wrote it out immediately upon returning home, intending to read it at the next semi-annual meeting, where I know that its strikingly original and boldly aggressive character would carry all before it and at once give me the highest place among the fellows of that influential body, and, through it, the medical world at large. But being feverish for fame, and fearing that some plodding fellow like Koch or Pasteur might stumble on the same discovery and get it before the world before the time for the society again to convene, I have concluded to rush it into print now, with full belief that some morning in the no distant future I shall, like Lord Byron, when he published the two first cantos of *Childe Harold*, "awake and find myself famous."

If you can not at once give this magnificent discovery the advantage of your wide circulation, for Heaven's sake return the manuscript at once, that I may lose no time in getting it into the *British Medical Journal*.

Yours truly,

BRAGG A. DOCIER, M.D.

Gentlemen: Inasmuch as at the two last semi-annual meetings of this society a fellow has almost unchallengedly claimed the invention of the antiquarians' beloved theory that *carbonic acid is the cause of all fevers*, I have felt encouraged to urge upon this society my more modern discovery, as the only true explanation of animal combustion and human preservation.

For a number of years I have given much attention and study to this subject, which is destined to reverse the very foundation upon which rests the greatest fallacious laws of the

practice of medicine. It is universally supposed that fever is a disease. It is no such thing! but is merely a symptom, and this symptom is always excited by the same cause, every time. And what is this cause? It is the accumulation, absorption, and irritation of carbolic acid in the blood.

Some croakers are always disposed to doubt every new discovery, but I will settle their convictions in a few seconds. It is astounding to me to see what faith is sometimes put in the thousands of useless experiments found in books. Any body that wishes to write a book can do the same thing if he wants to. I do not believe half of these authorities, although I've got most of them on my shelf. I have for years had my doubts about the truth of these science laws, and I can show the evidences of a blind faith in specific medicine in the ravages on my own head.

I have performed hundreds of chemical, theoretical, pneumatical, and other such experiments, in all the modern languages, to prove the fallacy of the falsely called common sense principles in medicine, and the indisputable veracity of my accumulation discovery.

My discovery is wholly original, because it was first revealed to me alone by an intimate friend some years ago.

Carbolic acid exists in the blood in small proportions in health. It is an antiseptic disinfectant, and prevents putrefaction and decomposition of the blood and general system. If it were not for this acid in the body, the humors of the blood would putrefy and smell strongly in life. In death this acid is destroyed, and the body takes on a peculiar odor generally known as *de mor-i-bust*, because of the explosive quality of the inside gas.

When a constitution becomes surcharged with a superexuberance of carbolic acid, there will be an irritation of the system and a radiation of heat and an exhilaration of the pulse, all of which, on account of the fast and heated motion, is termed *febrile movement*.

In swamps and other dwelling-places called malarious there will be found a strong inclination to rank growth and preservation of vegetables. But this is a poisonous air for the human, because the great amount of carbolic acid floating around promiscuously is waiting for a victim. I bottled a gallon of this air, some months ago, in a very weak solution of alcohol, and have taken small quantities of it from time to time, and it

*From advance sheets of a Paper intended to be read before the Mill Creek District Medical Society of Indiana.

was well preserved and of good flavor, because of the antiseptic powers of the carbolic acid.

I have examined the urine of persons living there who are afflicted with fever, and obtained the following uniform results: Color, clear old wine; smell, distinctly peculiar; when shaken up, large beads appear in it as sparkling as 1840; taste sour, somewhat saltish, and biting like carbolic acid, with an after-taste due to excess of carbolic acid. From the above it is seen that only by the taste does chemical analysis reveal the carbolic acid.

When bacteria swarm in the blood the carbolic acid is increased, and produces febrile movement, in the same manner as when fleas swarm in warm weather, itching is increased, and also produces a sort of reflex febrile movement. If the carbolic acid is not sufficiently concentrated the bacteria and other leucocytes increase their offspring on the inside and lend a helping hand to others on the outside. If the disease continues to a favorable termination, the vermin and the carbolic acid neutralize each other; if it ends fatally, it does so because the vermin get the advantage of the acid and devour it, thereby destroying themselves and likewise the patient, in a like manner as a doctor might do who would unwisely take the same medicine he had prescribed for his patients.

These facts can be proved, but I have no faith in the microscope. It don't teach any thing, and you don't know what you see when you look into one. Neither do I take any stock in contagious diseases. I don't think any thing is contagious. I have been exposed many a time—why haven't I caught them? If they were catching, who caught the first case? These are incontrovertible facts.

Malarial fever is a thing which exists only in the swampy brains of utopian sensation-alists. It is a fever caused by the evolution of oxygen and carbolic acid from conglomerate vegetables at 65 above zero in the shade. It is a fever which attacks the bilious excretion, the cholagogue, and, according to the renowned Dr. Quincey, the mesenteric glands behind the kidneys are also infected.

I never lost a case of fever when I was sent for in time to get my medicines to act. I never experiment on human lives as others do. I treat them all alike. My "Great Universal Panic for all Evils" never fails if used in time to act. Some is taken inside

and a little rubbed on the outside. The receipt is secret, and can not be revealed.

Surgical fever is all nonsense. The fever from wounds is caused by a disturbance of the blood in the injured part, and disintegration of hemoglobin, and conversion into free active carbolic acid, just as the Lycians were converted into free active frogs by Latona for disturbing the water. This circumfusion of heat is then transmitted throughout the whole constitution by reason of the first law of heat, which says that heat tends to spread itself promiscuously through all substances.

The fever of disruptive diseases of the skin is caused by the disability of the disruptive skin to exhale the accumulated carbolic acid, and it is then absorbed by the nerves, irritating the whole nervous system and resulting in a superexuberance of heat.

I will report a case. A man who had been to all the doctors without obtaining health came to me, as he heard a good deal about me. He had exhilaration of the pulse and pain inside the cerebellum, especially about the lower part of the right spleen. I examined his breath and tongue, and found both severely loaded, especially in the odors, which had a considerably strong suspicion of old disintegrated and decomposed carbolic acid. The eruptions of the sternum were frequent, numerous, excessively strong and unpleasant, and more severe than the tongue or breath could tell; but the carbolic acid scent was obliterated in the strength of the others, because, as was apparent, of the affectionation about the spleen. I put him on treatment and he got well.

This is a case which was deficient in carbolic acid, and the result was partial decomposition and putrefaction of some of his internal viscuses.

These grand truths are incontrovertible. Your authorities may be against me, but the time shall soon come when all will see the light. I suggest that the chair appoint a committee to investigate this subject and report at our next meeting.

BULL CREEK P.O., Ind., Lock-box 320,
9th month, 14th day,

PROF. GRAHAM BELL, the inventor of the telephone, received the honorary degree of Doctor of Medicine at the Tercenary Celebration of the University of Würzburg, with Charcot of Paris, Clausius of Bonn, Quincke of Heidelberg, and Bdaumüller, the Vienna bookseller.

Pharmaceutical.

AMERICAN SPONGES.—The National Museum of Natural History, at Washington, D.C., is soon to be enriched by a complete collection of American sponges. Mr. D. A. Gabay, manager of the sponge department of McKesson & Robbins, who are making this collection for the National Museum, displayed about fifty specimens for our inspection. Among them, in addition to the well-known sheep's wool, grass, glove, etc., were several unique shapes and curious. One, a "rolling johnny," as it is called by the sponge gatherers, is rarely seen in the markets. It is a sponge that has become detached by the action of the waves, and by constant rolling about on the bottom of the sea becomes nearly spherical in shape, hence its name. Another interesting specimen is a petrified sponge bearing a faint resemblance to brain coral, but entirely lacking the symmetry and beauty of coral. A Neptune's cup of large size is also among the collection, which numbers about fifty specimens, some in their natural state, some cleaned, and still others bleached, and taken from all depths of water varying from four to twenty feet. A specimen is also shown preserved in alcohol, the sponge being placed therein just as taken from the water. It is not a pleasant-looking object to view, but is of interest to the student of natural history and to all interested in sponges.—*Weekly Drug News.*

ARTIFICIAL PIPERINE.—M. Rugheimer describes the successful attempt to build up the alkaloid piperine by the same methods as those adopted by Ladenburg in the preparation of artificial atropine. The action of phosphorus pentachloride upon piperic acid yielded the acid chloride, which was then made to act upon piperidine. The result of the reaction, freed from side products, was piperine, which, after purification by recrystallization from benzol and ligroin, fused at 127° to 128° C., and gave figures on analysis closely according with those demanded by the formula. Natural piperine, according to Rugheimer's observation, fuses at 128° to 129.5° C. In some text-books the fusing point of piperine is erroneously given on Pelletier's authority at 100° to 110° C. The author promises still further experiments to establish the identity of the natural and the artificial alkaloids.—*Ber. Chem. Ges.*

AMERICAN PEPSIN.—A communication on the gastric juice was lately sent by M. Chaptant to the Académie des Sciences. He believes that pepsin results from the combination of an albuminoid matter with an organic acid. Pepsin, one of our latest new remedies, is undoubtedly one of the most efficacious and is continually growing in favor. American pepsin is acknowledged to be the best in the world.—*Weekly Drug News.*

Formulary.

METATARTRATE OF MAGNESIA.

The following is the formula given by the "Dutch Society for the Advancement of Pharmacy":

Metatartaric acid.....	10 parts;
Distilled water.....	40 "
Magnesia carbonate, about.....	7 "
Alcohol.....	q. s.

Dissolve the acid in the water, and add, under stirring, so much carbonate of magnesia as may be required to be in slight excess. Filter the solution immediately, and add to the filtrate double its volume of alcohol. When the precipitate has settled, pour off the alcohol, spread the magma upon a plate of glass or porcelain, and let it dry in a cool place.

Metatartarate of magnesia is an amorphous, not hygroscopic salt, which may easily be converted into a white powder, and is soluble in four parts of water. When dissolved in water it soon is converted into ordinary tartrate of magnesia, and therefore should not be kept in stock in solution.

DIURETIC WINE.

Several formulæ are given by different authorities, but the following is probably as good as any and is the one usually recommended:

Oil of turpentine.....	fl. ℥ ij;	8.00 fl. Gm.;
Lemon juice.....	fl. ℥ j;	30.00 fl. Gm.;
Wine.....	fl. ℥ iv;	120.00 fl. Gm.

These, after mixing, should be taken at one dose. A light wine, as Rhine or Hungarian, is best.—*The Weekly Druggists Circular.*

TO PROMOTE EXPECTORATION IN EARLY STAGE OF PHTHISIS.

R Ammon. muriat.....	℥ ss;
Opii pulv.....	gr. x;
Digitalis pulv.....	} aa ʒ j.
Scillæ pulv., ad.....	

M. Div. in pil. xxx. Sig. One every six hours.
—*Medical Gazette.*

A POWERFUL DIFFUSIBLE STIMULANT FOR A CHILD FIVE OR SIX YEARS OLD.

R Etheris vel spts. etheris.....	} aa m v;
Spts. chloroformi.....	
Spts. myristicæ.....	m x;
Infus. caryophylli.....	℥ iij.
M.	

—*Western Med. Reporter.*

TREATMENT OF INFANTILE GASTRO-ENTERITIS.

From observations made in the Children's Hospital at Pesth, Prof. Epstein concludes (*Prayer Med. Wochens.*) that a liquid diet, poor in fatty matters, is the basis of treatment of gastro-enteritis in young infants. He recommends particularly an albuminous lemonade, obtained by beating up the white of an egg with a pint of water previously boiled, the resulting mixture being then carefully filtered. At the Pesth hospital this is prepared fresh three times daily, and is kept in a bottle well corked and placed upon ice. In a word, all precautions are taken to prevent the introduction of micro-organisms into the system.

Nursing from the breast should be entirely stopped for the first few days. Every three hours fifty grams of milk at a lukewarm temperature may be given to the child, either with the bottle or by spoonfuls. The child should not be put back to the breast until the loss of flesh, which is considerable at first, begins to diminish. Again, when at the commencement there is violent vomiting and rejection of yellowish curds, M. Epstein washes out the stomach daily for from eight to fifteen days by means of the esophageal tube. As regards direct remedial measures, M. Epstein employs the following potion:

R Sodæ et magnes. benzoat..... ℥iv;
Sp. vini gall..... ℥ss;
Aquæ..... ℥vj.

M. Sig. Teaspoonful every two hours.

When there is any tendency to collapse, recourse may be had to the following:

R Tinct. valerian..... }
Vini port (pur.)..... } ℥ss.
Ether. sulph..... }

M. Sig. One or more drops of this mixture may be given in a spoonful of water.

When the child presents any sign of cerebral hyperemia, with great agitation, chloral in small doses may be prescribed:

R Chloral. hydrat..... gr. viij;
Aquæ..... ℥xij.

M. Sig. One teaspoonful of this solution may be given every half hour while excitement continues.

Finally, when the inflammation has reached the large intestines, and symptoms of dysentery supervene, it may be attacked directly by the following enemata:

R Ac. boracic..... ℥ss;
Aquæ destil..... ℥iij. M.
Or with—

R Argenti nitrat..... gr. xij;
Aquæ destil..... ℥ixss. M.

The results obtained from this course of treatment are, it appears, excellent.—*Med. and Surg. Reporter.*

NEURALGIA OF THE STOMACH.

R Bicarb. potassæ..... ℥j;
Acid. hydrocyanici..... }
Sol. sulph. morph..... } ℥gtt. xxiv;
Aquæ camphoræ..... ℥iv.

M. Ft. mist. Sig. Teaspoonful as required.

—*Medical Gazette.*

EUCALYPTUS is highly recommended as a topical remedy by Dr. B. G. Hagie, in *Northwestern Lancet*.

Selections.

Two Cases of Malignant Pustule, together with a Table of Seventeen Cases Treated at Guy's Hospital.—Read before the Royal Medico-Chirurgical Society June 13, 1882, by J. N. C. Davies Colley, M.B.:

In this paper the author tabulated seventeen cases of malignant pustule or charbon which had occurred during the last nine years at Guy's Hospital, and gave more fully the details of two which were admitted into his wards last year.

Case I. F. R., aged thirty-one, worked in a hide-warehouse, and had been engaged for eight days with Australian fleeces. On April 10, 1881, a small red spot appeared on his right lower eyelid. It grew rapidly. On the 16th he was admitted with the eye closed, and with a partly dry, partly vesicular eschar covering nearly the whole of the swollen lower eyelid. He was in little pain, but weak, trembling, and feverish; the glands were swollen. Immediate relief followed the excision of the eschar. In a few weeks the wound had healed, but the eyelid remained everted. Bacilli were found in the blood at the time of operation.

Case II: T. W., aged thirty-nine, a tanner, had been handling foreign hides until July 2, 1881. He then left off work, and on July 6 noticed a red itching swelling on the cheek. It grew rapidly. On the 10th he lost appetite, and on the 11th he was admitted with a raised nearly circular patch of more than an inch in diameter in the middle of his cheek. The center of this patch was slightly depressed, dry, and nearly black. The sides were covered with small, closely-packed vesicles. There was swelling of the cervical glands and edema of the neck. The eschar was excised, and chloride of zinc applied. He recovered rapidly. Appended was a colored drawing of the charbon, and drawings of the microscopic sections of the eschar, showing the bacilli anthracis in the corium and round the hair follicles.

The author called attention to the following facts:

1. Malignant pustule or charbon is not unfrequent among tanners or wharf laborers who have to handle foreign hides and fleeces.

2. It has not yet been observed at Guy's Hospital as a primary disease in the viscera, or in the form of malignant edema of the integument.

3. It has been seen only on exposed parts of the body, *e. g.*, the face, neck, and arms, the most dangerous position being the neck, probably from its vicinity to the larynx.

4. The seventeen cases were between the ages of eleven and forty-seven, and the majority were young adults of the male sex.

5. Twelve out of seventeen cases occurred in September and the four following months.

6. The disease may be confounded with malignant facial carbuncle, poisoned wounds, and primary chancres of the face. The chief points to notice are the painless character of the eschar, its vesicular margin, and slightly depressed, dry, blackish center.

7. The nature of the disease is not unfrequently overlooked, and its symptoms have been attributed to such causes as the bite of a mosquito, or the absorption of arsenic through an abrasion.

8. It should be treated at once by excision or free cauterization. Out of fifteen cases in which the es-

char was excised, eight were already suffering from constitutional symptoms, and twelve had considerable edema or glandular enlargement. The two cases in which excision was not performed were admitted with dyspnea and other serious symptoms, and it is probable that in them the operation would not have averted the fatal result.

9. Swelling of the most superficial part of the cutis with the formation of a ring of papules surrounding a zone of vesicles, at the center of which is an eschar, is the earliest change recognized.

10. Bacilli are present in these papules but not beyond them, being numerous in the tissue of the cutis immediately below the eschar, and above to its borders, and most abundantly just below the Malpighian layer of the epidermis covering the outer part of the eschar.

Some remarks were made upon the subject of the paper by Mr. Bryant and the author.—*British Med. Journal.*

Acne.—Under this name certain conditions which differ considerably from each other are grouped, but my impression is that the grouping is to a considerable extent natural, and that they really are closely related. All forms of acne have this in common, that they are due to morbid processes occurring in or around sebaceous glands, and further, that their commonest site is the face, with the exception, perhaps, of white acne of milium, which is due to congenital occlusion of some of the gland orifices and accumulation of white albumen (?) under a thin transparent pellicle of epidermis. All are, at one stage or another, attended by congestion or inflammation. Their differences depend probably upon differences in the character of the skin in different persons, differences in age, and modification in the ordinary causes. In order that acne should occur, it is essential in the first place that the sebaceous system should be largely developed, and the skin moderately thick. These conditions given, we shall then be able to watch the play of various influences, local and general, upon their subject's health in producing its various forms. If his state of tone and vigor remain perfect, probably his glands will continue to elaborate and pour forth their secretion without any disturbance. No accumulation will occur, and no secondary congestion around them will be observed. But the slightest, the most temporary disturbance of tone, may derange the function of these glands, and may permit the retention of a thick secretion, or favor the occurrence of inflammation around an irritating plug. How rarely do we witness the occurrence of acne in any form before puberty, and how frequently do we obtain proof after the period that the influence of the sexual system is all-potent in so disturbing the tone that acne spots are produced. In girls menstruation is often attended regularly every month by fresh eruptions of acne, and in boys nocturnal emissions frequently have the same effect. If, however, the integument were originally thin and not greasy, then it is possible for the tone to be very seriously damaged by the causes adverted to, and yet no acne may be produced. In such cases pallor of skin may be the only result. In others in which there is less than usual proneness to inflammation, and perhaps very slight disturbance of tone, a peculiar form of lichen-acne, or very chronic persisting enlargement of the gland without congestion, may occur. This is seen chiefly in the temples and forehead, and in the male sex it is often coincident with similar long

persisting enlargement of the glands on the penis and scrotum.

The location of acne on the face is probably often explained by preëxisting peculiarities in the state of the skin of the face. Some get acne almost solely on the chin, or on the chin and cheeks, and these are almost always those in whom the nose is specially thin. On the other hand, those in whom the nose and skin are generally thick become liable when acne is developed to have the cellular tissue around the glands implicated as well as the glands themselves. Thus tuberoso indurations of a very chronic nature may be produced, which, if in adult life the causes of aggravation remain, may advance from what is known as acne tuberosa to the grotesque deformities.

Acne is very constantly hereditary, the same form often prevailing in several members of a family, and acne tuberosa, I believe, often descends in several generations from father to son. I have not seen acne tuberosa more than once in women, and in that instance a sister of the patient had common acne, and here males had shown the tuberoso form. The pustular or common form belongs to youth, the rosaceous or erythematous to adult life. If, then, we attempt to reply to the question, "What does acne in its various forms imply?" we should, I think, have to answer that, in the first place, it denotes original and heritable peculiarity in the structure of the skin; next, that its common form in young persons usually implies greater or less disturbance of tone in connection with the sexual system, and that its rosaceous form results from dyspepsia, attended by flushing of the face after meals. The tuberoso variety implies original peculiarity of structure, and is often aggravated by dyspepsia and intemperance. Common acne is almost constantly attended by proofs of enfeebled circulation, such as cold feet, and often by constipation. Closely associated with acne are the liability to styes, to some forms of sycosis, and to boils, but with these exceptions I know of no forms of skin disease which are due to the same class of causes, or denote the same conditions of health.—*Jonathan Hutchinson, in Med. Press and Circular.*

Antiseptic Treatment of Abscess.—Dr. Lucas Championnière recommends in the *Union Médicale* the following procedure: Before opening an abscess, in whatever region it may be placed, we should carefully wash the skin, especially if it has been covered by a poultice, with a strong carbolic acid solution: *R* Acidi carbolic, 50 parts; glycerini, 75 parts; aquæ, 1,000 parts. *M.* The bistoury should also be dipped in the solution. The contents of the abscess are to be discharged, and some of the above solution injected, care being taken that the injected liquid has a free issue. The end of a caoutchouc tube is introduced into the wound, having a thread attached to it to facilitate its removal, and it is then covered by a thick layer of charpie, impregnated with a solution of carbolic acid 25 parts, glycerin 25 parts, and water 1,000 parts. Finally, over all is laid a layer of gummed silk. At the end of twenty-four hours the tube is removed in order that it may be cleansed and shortened, when it is again covered with the charpie moistened with the weaker solution. Under this treatment the amount of suppuration is diminished, the redness of the wound becomes insignificant, and the cicatrices which result are much less apparent. Dr. Lucas recommends this procedure especially in abscess of the breast.—*Canada Med. Record.*

Ether vs. Chloroform.—In a recent letter to The Lancet, Mr. W. H. Fenton Jones, after commenting on what he considers the "grave risk attendant upon the administration of chloroform," says:

I would at once put the question, Why use it when a far safer and more preferable agent is within reach? How many deaths would have been avoided had it been the universal practice to adopt Mr. Jonathan Hutchinson's golden rule, "Ether for all patients over six years of age and under sixty"? Does not this rule cover such cases as those recorded last week, and many others from time to time reported?

The history of the fatal case is practically the same. It is a young or middle-aged patient, in fair, or even robust health, who is about to submit to some minor, but painful operation. Chloroform is administered; the first stage is protracted; in the second stage suddenly the pulse becomes weak, then stops; a few embarrassed attempts at respiration are made, and all is over. The horror-stricken attendants send galvanic shocks through the thorax, and vigorously perform artificial respiration, but all to no purpose. The autopsy reveals a healthy, or slightly fatty heart, with uncontracted ventricles. Would all this have happened had ether been the anesthetizing agent employed? I venture to say, emphatically, no. Ether stimulates instead of depressing the heart's action. Ether never caused the heart to fail in a young or middle-aged patient in fair or robust health. Why should chloroform then be used for such cases? Is it because, though acknowledged to be infinitely more dangerous, it is claimed to be more manageable and quicker in its action? This excuse does not hold good since Ormsby and Clover have placed in our hands their simple and efficient inhalers. Of the two I much prefer Ormsby's.

As house-surgeon to Mr. Jonathan Hutchinson, and house-physician to Dr. Palfrey, I had very great opportunities of testing various anesthetizing apparatus and agents. From an analysis of one hundred cases taken hap-hazard, where Ormsby's inhaler was employed, I find that complete anesthesia is obtained in a shade under two minutes, and that the quantity of ether required is an ounce and a half for an operation lasting twenty-five minutes. The stage of excitement is very short. The secretion of mucus and consequent frothing about the mouth, and troublesome accumulation in the larynx, are reduced to a minimum. The mask is so readily removed and replaced that operations about the mouth and nose are but little interfered with by the anesthetizer. Since the Ormsby inhaler has been taken into general use at the London Hospital I am informed that the saving in ether has been enormous, and what I consider far more important is that chloroform is being gradually banished from the wards.

One word more and I have done. From my practice of the last six months I can fully indorse Mr. Hewetson's remarks as to the advantages of ether prepared from methylated spirits. On the other hand, I have observed no disagreeable results from its use.

Colossal Doses of Belladonna in Dysentery.—A young married lady in the middle of October arrived at Shanghai from another port, dying, gangrene of the bowel having already set in. The motions were scanty, but extremely frequent, and consisted solely of blackish-green sloughs of various sizes and blood-clot, with occasionally a smart gush of hemorrhage. Excessive loss of blood and prob-

ably the treatment adopted had prevented the appearance of the more acute symptoms of general peritonitis, but the abdomen was extended and tympanitic, and its entire surface so sensitive that it was impossible to discover whether any fluid effusion was or was not present. Thirst was intense and vomiting incessant, but both were more or less controlled by ice and hydrocyanic acid. The patient lingered for five days after her arrival, during the first two of which a marked and puzzling symptom was furious delirium, with extraordinary hallucinations, lending an indescribable expression of terror to the face, which the natural course of the disease had rendered yellow and pallid. Wide and persistent dilatation of the pupils led to minute inquiries into the previous treatment, when it was discovered that through some misapprehension colossal doses of belladonna had been administered. The patient had been taking pills containing half a grain of opium and a quarter of a grain of sulphate of zinc, with extract of belladonna "q.s." Each pill weighed eight grains. Hence if nothing but what appeared in the prescription entered into its composition, the dose, which was ordered to be given six times daily, contained seven grains and a quarter of extract of belladonna. The pills had, however, been, in fact, taken only four times one day and three times the next, and had been omitted on the third day. Thus, always supposing that nothing but the three ingredients above enumerated was contained in the pills, fifty grains of extract of belladonna had been swallowed in two days. It is to be presumed that the extract had suffered from the effects of climate and age. The prescription, it should be remarked, had been made up by a Chinese dispenser. — *Dr. Alex. Jamieson, of China, in Medical Times and Gazette.*

Osteotomy.—Fourteen cases in which osteotomy was done for the relief of rachitic curvatures of the limbs, for genu valgum, for ankylosis of the hip, and for complicated or viciously united fractures, serve as the basis for a recent communication by M. Jules Boeckel, of Strasbourg, to the *Revue de Chirurgie*. In connection with these, he considers, also, nine cases communicated to the Society of Surgery of Paris, making a total of twenty-three recent cases to be added to his previous reports on this subject. In all these cases a cure resulted. Of the whole number seven were adults of from fifteen to twenty-eight years; and fifteen were children, the youngest of whom was eighteen months, the eldest eight years. In sixteen instances suppuration was wholly wanting, and the cases were healed with one, two, and three dressings; slight suppuration occurred in six cases; in one only was it abundant. The operation was complicated in this case by a phlegmonous erysipelas, which necessitated repeated incisions. The time necessary for consolidation to be accomplished varied from a minimum of twenty-one and twenty-eight days to a maximum of two and three months. The final result has been most satisfactory in all the cases. A permanent cure was determined at the end of months and years, seven years in the cases first operated upon. In the opinion of the author, osteotomy, done with Listerian precautions, is in children so simple and harmless an operation that their stay in hospital is unnecessary. For two years he has sent such patients to their homes, after operating, without ever having had to regret it. For the relief of genu valgum he adopts exclusively the method of Macewen. — *Annals of Anat. and Surg.*

Erysipelas Analogous to Elephantiasis.—

Erysipelas has in elephantiasis a congener of great interest. The distinction between the solid edema which results from recurrent attacks of erysipelas and the more characteristic form of elephantiasis is only a matter of degree, and it is well known as regards all elephantiasis that repeated attacks of rigors with erysipelatous swelling are constant features of the disease. One is tempted, indeed, to go the whole length, and declare that elephantiasis is, after all, only an example of persisting exceeding chronic erysipelatous inflammation with its resulting hypertrophic changes. Elephantiasis may vary infinitely in degree, but not at all so far as I know it in kind. It always begins in edema, and from this it slowly progresses to hypertrophy. The hypertrophy may implicate the corium and cellular tissue only ("smooth elephantiasis"), or it may involve also the papille, and produce the tubercular form. Usually these two forms occur together in different parts of the same limb. The solid edema, which is its first stage, may begin from a variety of causes. It may be induced by an attack of *bona fide* erysipelas, by an injury, by any slight local inflammation, a chancre, an excoriation between the toes, etc. Almost invariably its persistence is favored by the mechanical disabilities of the part as regards the return of the venous blood and the contents of the lymphatics. We meet with elephantiasis chiefly in the legs, the labia, clitoris, penis, and scrotum, parts which, if once they become swollen, are dependent. The non-symmetry which prevails in a large majority of cases denotes the influence which purely local inflammation has in locating the disease. In some cases it affects equally both legs, and in these it may be taken for granted that the constitutional predisposing cause is strong. Such cases prove the fact of hereditary diathesis. They are scarcely ever met with in England, but only in those climates where the disease is endemic, and in races or tribes who are peculiarly liable to it.

When the elephantoid process has once well set in I believe it is never wholly cured, and no better instance could be produced of the pathological advantages of possession. The worse the disease is the worse it is likely to become. It is emphatically a self-aggravating malady. The mere fact of its existence tends necessarily to its spread. Slowly but surely it undermines the health of its subject, impoverishing his blood, and mainly by the recurring attacks of erysipelas which attend it, enfeebling his tone. Constitutional treatment does but little, and local measures are the only chance of benefit.—*Jonathan Hutchinson, F.R.C.S., in Med. Press and Circular.*

Professor Billroth on the Practical Aspect of Koch's Discovery.—In a recent lecture to the Berlin Reichsgesundheitsamte, Prof. Billroth discussed some of the practical aspects of Koch's discovery. He pointed out how the accumulating knowledge of the coarser pathological relations of tubercle have led to the conviction that the discovery must shortly come, and he paid a tribute to the investigations of Villemin as having constituted the first and greatest step in the discovery—the step of demonstrating that tubercle is inoculable. This proved its dependence on a transferable virus, although we are only now able to eliminate the possibility that the virus might be of simply chemical nature. The various degrees of individual proclivity to suffer, observed

in man, render it very important to study the variations of proclivity which are observed in animals. As a rule it appears that the carnivora are less susceptible than the vegetable feeders (an unpleasant fact, by the way, for vegetarians). In the case of man the only safeguard is the normal unsuitability of the soil, apart from the existence of inherited fitness. But another reason why local tubercle often exists without general infection—why, for instance, scrofulous caries of a rib so often exists without a general infection—is due to mechanical conditions. At the periphery of such a tubercular focus, in a bone or a lymphatic gland, there is an induration which probably hinders the exit of the tubercular organism and its passage into the blood current. The necessity of a high temperature, such as that of the blood, for the growth of the organism probably lessens very much the extent of the disease in man, since, if the germs could develop out of the body, they would probably be ubiquitous.

While the discovery of Koch raises into even greater importance than before the inherited predisposition, it will probably lead to some modification of our views as to the influence of that predisposition. Cases may be due to infection which are now regarded as the result of inheritance only. A consumptive mother, for instance, may infect a child through a pocket handkerchief; moreover, the germs may be received by eating the flesh of infected animals. Certainly the conclusions are sufficiently probable to make it incumbent on us to treat consumption as in a measure an infectious disease.—*The Lancet.*

Typhoid Fever in China.—Fifteen years ago some of the older practitioners denied positively that typhoid fever was ever seen among foreigners in China. More accurate diagnosis now refers a large number of cases to typhoid which at an earlier date would have been classed somewhere under the heading of malarious affections. For my own part, after the collation of a very considerable number of cases extending over thirteen years, and in which all the phenomena accessible to direct observation are recorded, I have come to believe firmly that the remitting fever which lasts more than a week and does not yield to antiperiodics is typhoid. Some cases of remitting fever, which before being seen have been treated fruitlessly with quinine, yield when the drug is interrupted and its administration resumed after the action of an emetic or of a smart purge, or when it is combined with salines or with arsenic, or occasionally when, instead of giving it by the mouth, it is given as an enema. But when it is clear that antiperiodics are of no benefit, they are, I believe, hurtful, and the sooner they are abandoned the better. In these cases we have, I do not doubt, to deal with typhoid, although there may be neither delirium, nor diarrhea, nor eruption, nor tenderness in the ileocecal region. There is, however, generally more or less tympanites, and almost invariably a marked depression, for which the actual degree of fever is insufficient to account. In all these cases the time for quinine comes later. During the third week, when the morning temperature may be normal or subnormal, there is commonly a rise to 100° or 101° between 6 o'clock P.M. and midnight. One large daily dose of quinine is at this stage invaluable.—*Dr. Alexander Jamieson, in the Chinese Imperial Maritime Customs Medical Reports; Med. Times and Gazette.*

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Persulphate of Iron.....	14.394
Sulphate of Iron.....	1.708
Sulphate of Lime.....	4.782
Sulphate of Magnesia.....	968
Chloride of Sodium.....	532
Silicic Acid.....	3.500
Sulphate of Potassa.....	Trace
Sulphate of Ammonia.....	Trace
Sulphate Manganese.....	Trace
Phosphoric Acid.....	Trace

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